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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,324	11/13/2003	Bill Riel	1471107-0202	1980

7590 07/06/2005
Paul S. Weidlich
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Chattanooga, TN 37402

EXAMINER

STEPHENSON, DANIEL P

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,324

Applicant(s)

RIEL ET AL.

Examiner

Daniel P. Stephenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/13/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 5 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 7 of copending Application No. 10/972885. Although the conflicting claims are not identical, they are not patentably distinct from each other because they merely remove limitations that are present in the '885. The mere removal of limitations, thus broadening the scope of the claim, does not impart novelty.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 4 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garret et al. in view of Martin et al. Garret et al. (Figs. 1-3, 7 and 8) discloses a dual wall drill string assembly adapted for any subsurface drilling. It has a metallic outer tube (30,37) with first and second ends with threads for connecting to adjacent outer tubes. There is also an inner tube with first and second ends having male and female portions that interact between adjacent tubulars. The inner tube is enclosed within and coaxially with the outer tube forming an annular space there between. It is stated that the string is used in reverse circulation drilling, and therefore inherently has a means for conveying fluid through the annular channel, in addition the channel is adapted to convey drilling fluid under pressure toward the inner tube first end, and the inner tube is adapted to convey cuttings toward the inner tube second end. There is also means for reinforcing the inner tube that does not restrict the flexibility of the outer tube. This reinforcement takes the form of a centering element (50, 60) located within the annular channel. The centering element is a sleeve with openings therein. Depending on which sleeve is observed the cross sectional area of the openings is either larger or smaller than the inside area of the inner

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pipe. Garret et al. does not disclose that the inner pipe is a flexible, substantially non-metallic pipe. Martin et al. (Figs. 1 and 4) discloses a drill pipe which has an outer tubular and an inner tubular. The inner tubular is made of a flexible substantially non-metallic material. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the material of Martin et al. with the apparatus of Garret et al. This would be done so that the cost of lining the metal components for corrosion resistance could be lowered as taught by Martin et al. (col.1 lines 28-41).

6. Claims 1-4, 11, 15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Martin et al. and Chapman '878. Willis (Figs. 1 and 5) discloses a dual wall drill string assembly adapted for any subsurface drilling. It has a metallic outer tube (22) with first and second ends with threads for connecting to adjacent outer tubes. There is also an inner tube (24) with first and second ends having male and female portions that interact between adjacent tubulars. The inner tube is enclosed within and coaxially with the outer tube forming an annular space there between. The channel is adapted to convey drilling fluid under pressure toward the inner tube first end, and the inner tube is adapted to convey cuttings toward the inner tube second end. There is also means for reinforcing the inner tube that does not restrict the flexibility of the outer tube. This reinforcement takes the form of a centering element (32) located within the annular channel. Willis does not disclose that the inner pipe is a flexible, substantially non-metallic pipe, nor does it disclose that the string has a drilling mechanism attached or has a means for conveying fluid through the annular channel. Martin et al. (Figs. 1 and 4) discloses a drill pipe which has an outer tubular and an inner tubular. The inner tubular is made of a flexible substantially non-metallic material. It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to use the material of Martin et al. with the apparatus of Willis. This would be done so that the cost of lining the metal components for corrosion resistance could be lowered as taught by Martin et al. (col.1 lines 28-41). Chapman '878 discloses a dual concentric drill string with a connector sub and bit (13) at the lower end that is attached to a drill string for reverse circulation drilling. Drilling fluid is flown down the annulus passage and cuttings are passed back up through the inner tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the bit and circulation flow of Chapman '878 with the apparatus and method of Willis in view of Martin et al. This would be done because it is common knowledge that this is how reverse circulation flow is performed.

7. Claims 3, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garret et al. in view of Martin et al. as applied to claim 1 above, and further in view of Chapman '878. Garret et al. in view of Martin et al. shows all the limitations of the present invention, except they do not explicitly state that that is a drilling mechanism on the end the drill string. Chapman '878 discloses a dual concentric drill string with a connector sub and bit (13) at the lower end that is attached to a drill string for reverse circulation drilling. Drilling fluid is flown down the annulus passage and cuttings are passed back up through the inner tube. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the bit and circulation flow of Chapman '878 with the apparatus and method of Garret et al. in view of Martin et al. This would be done because it is common knowledge that this is how reverse circulation flow is performed.

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8. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garret et al. in view of Martin et al. as applied to claim 1 above, and further in view of Terry et al. Garret et al. in view of Martin et al. shows all the limitations of the present invention, except they do not explicitly state that the inner tube has a conductive element for conducting data or electricity through it, or that this element is a fiber optic line or a metallic mesh or that it is enclosed within the inner tube or that it communicates with a steering mechanism. Terry et al. discloses a composite material tubular that encloses a number of communication lines within, including fiber optic, copper lines and metallic meshes. These lines communicate with a number of downhole implements including a steering mechanism that monitors the direction of the drill. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the enclosed lines and steering mechanism of Terry et al. with the apparatus and method of Garret et al. in view of Martin et al. This would be done to allow for communication downhole and steering for directional drilling, as is common knowledge in the wellbore art.

9. Claims 5-10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willis in view of Martin et al. and Chapman '878 as applied to claims 1 and 17 above, and further in view of Terry et al. Willis in view of Martin et al. and Chapman '878 shows all the limitations of the present invention, except they do not explicitly state that the inner tube has a conductive element for conducting data or electricity through it, or that this element is a fiber optic line or a metallic mesh or that it is enclosed within the inner tube or that it communicates with a steering mechanism. Nor do they disclose that the drilling is done in a substantially vertical but arcuate path. Terry et al. discloses a composite material tubular that encloses a number of communication lines within, including fiber optic, copper lines and metallic meshes. These lines

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communicate with a number of downhole implements including a steering mechanism that monitors the direction of the drill. It is also disclosed that the drilling can be steered to a path that is arcuate but substantially vertical. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the enclosed lines and steering mechanism of Terry et al. with the apparatus and method of Willis in view of Martin et al. and Chapman '878. This would be done to allow for communication downhole and steering for directional drilling, as is common knowledge in the wellbore art.

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garret et al. in view of Martin et al. and Chapman '878 as applied to claim 17 above, and further in view of Terry et al. Garret et al. in view of Martin et al. and Chapman '878 shows all the limitations of the present invention, except they do not explicitly state that the drilling is done in a substantially vertical but arcuate path. Terry et al. discloses drilling in an arcuate path that is substantially vertical. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use drilling method of Terry et al. with the method of Garret et al. in view of Martin et al. and Chapman '878. This would be done to allow for the drilling of lateral boreholes, as is common knowledge in the wellbore art.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Garret et al. or Willis in view of Martin et al. and Chapman '878 as applied to claim 17 above, and further in view of Cherrington '267. Garret et al. in view of Martin et al. and Chapman '878 shows all the limitations of the present invention, except they do not explicitly state that the drilling is done in a substantially horizontal arcuate path. Cherrington '267 discloses drilling in an arcuate path that is substantially horizontal. It would have been obvious to one of ordinary skill in the art at the

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time the invention was made to use drilling method of Cherrington '267 with the method of Garret et al. in view of Martin et al. and Chapman '878. This would be done to allow for the drilling of horizontal boreholes, as is common knowledge in the wellbore art.

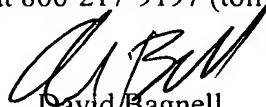
Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morris, Kellner et al., Frost et al., van der Wijden and Sandquist et al. all show similar features to those of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel P. Stephenson whose telephone number is (571) 272-7035. The examiner can normally be reached on 8:30 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David Bagnell
Supervisory Patent Examiner
Art Unit 3672

DPS 